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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 4

[PS Docket No. 11-82; FCC 12-22]

Extension of the Commission's Rules Regarding Outage Reporting to Interconnected Voice over Internet Protocol Service Providers and Broadband Internet Service Providers.

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Commission extends the outage reporting requirements of the Commission's rules to interconnected Voice over Internet Protocol (VoIP) service providers and defers action with respect to reporting of outages of broadband Internet services. In addition, the NPRM for The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers proposal included reporting of both outages based on the complete loss of service and those where, while service is technically available, technical conditions effectively prevent communication. The rule adopted applies only to outages resulting from complete loss of service and only to interconnected VoIP services. Collecting this data will help the Commission help ensure the Nation's 9-1-1 systems are as reliable and resilient as possible and also allow the Commission to monitor compliance with the statutory 9-1-1 obligations of interconnected VoIP service providers.

DATES: The rules in this document contain information collection requirements that have not been approved by OMB. The Federal Communications Commission will publish a document in the Federal Register announcing the effective date.

FOR FURTHER INFORMATION CONTACT: Gregory Intoccia, Special Counsel, Cybersecurity and Communications Reliability Division, Public Safety and Homeland Security Bureau, (202) 418-1470 or gregory.intoccia@fcc.gov (e-mail). For additional information concerning the Paperwork Reduction Act information collection requirements contained in this document, contact Judith Boley-Herman, (202) 418-0214 or PRA@fcc.gov (e-mail).

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order in PS Docket No. 11-82, FCC 12-22, released to the public on February 21, 2012, and NPRM released in Federal Register in Vol. 76, No. 111, June 9, 2011; and correction Vol. 76, No. 121, June 23, 2011. The full text of the document is available for public inspection during regular business hours in the FCC Reference Center, Room CY-A257, 445 12th Street, SW., Washington, DC 20554, or online at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0221/FCC-12-22A1.pdf.

Initial Paperwork Reduction Act of 1995

Document FCC 11-184 seeks comment on potential new information collection requirements. If the Commission adopts any new information collection requirement, the Commission will publish another notice in the Federal Register inviting the public to comment on the requirements, as required by the Paperwork Reduction Act of 1995, Public Law 104-13 (44 U.S.C. 3501-3520). In addition, pursuant to the Small Business

Paperwork Relief Act of 2002, the Commission seeks comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

Synopsis

I. Introduction

1. Consumers are increasingly using interconnected VoIP services in lieu of traditional telephone service. Interconnected VoIP services allow a wireline or wireless user generally to receive calls from and make calls to the legacy public telephone network, including calls to 9-1-1. As of the end of 2010, 31 percent of U.S. residential telephone subscriptions were provided by interconnected VoIP providers, an increase of 21 percent from the previous year. The public’s increased reliance on interconnected VoIP services is also reflected in 9-1-1 usage trends; approximately 31 percent of residential wireline 9-1-1 calls are made using VoIP service. The availability and resilience of our communications infrastructure, specifically 9-1-1, directly impacts public safety and the ability of our first responders to fulfill their critical mission. The most effective way to maintain emergency preparedness is to work continuously to minimize the incidence of routine outages.

2. The Commission’s public safety mission is one of its core functions. In 2008, Congress affirmed the Commission’s efforts to accomplish this mission by codifying the requirement for interconnected VoIP providers to provide 9-1-1 services. Also, Presidential Directives and Executive Orders and related documents charge the Commission with ensuring the resilience and reliability of the Nation’s commercial and public safety communications infrastructure. The Commission also has the responsibility

to ensure continuous operations and reconstitution of critical communications and services, and plays an active role in Emergency Support Function 2 (ESF2), the communications branch of the National Response Framework, which guides the Nation's conduct during an all-hazards response. Executive Order 12472, which establishes the National Communications System, the functions of which include coordination of the planning for and provision of national security and emergency preparedness communications for the Federal government, also requires Commission participation.

3. There is cause to be concerned about the ability of interconnected VoIP subscribers to reach emergency services when they need them. In the past several years, a series of significant VoIP outages has increased our concern about the availability of 9-1-1 over VoIP service. Unlike other outages of voice service, VoIP outages are not reported to the Commission because the current outage reporting requirements apply only to traditional voice and paging communications services over wireline, wireless, cable, and satellite, but not to outages affecting interconnected VoIP services. Without detailed information about these outages, the Commission is unable to know whether and how well providers are meeting their statutory obligation to provide 9-1-1 and Enhanced 9-1-1 (E9-1-1) service.

4. Seeking to ensure the availability of 9-1-1 service, this Report and Order: extends the Commission's mandatory outage reporting rules to facilities-based and non-facilities-based interconnected VoIP service providers; applies the current Part 4 definition of an outage to outages of interconnected VoIP service, covering the complete loss of service and/or connectivity to customers; and requires that these providers submit electronically a notification to the Commission of the affected 9-1-1 facility as the

provider's contact person for communications outages at that facility. Requiring interconnected VoIP service providers to report even significant outages imposes a burden on them, but the cost to these providers of implementing the rules adopted herein is justified by the overwhelming public benefit of a reliable 9-1-1 system.

II. Background

5. To perform our statutory and administrative duties effectively, the Commission needs timely, accurate information about the Nation's communications infrastructure. Since 1992, the Commission has required wireline providers to report major disruptions to their communications services. In 2004, the Commission extended reporting requirements to providers of wireless (including paging), cable, and satellite communications. Reports are submitted online via the Commission's Network Outage Reporting System (NORS). The Commission uses outage information submitted pursuant to Part 4 of the rules to carry out its statutory mission to promote "safety of life and property." Specifically, Commission staff analyzes NORS data to spot statistically meaningful outage trends, then works either with an individual providers or through industry groups, as appropriate, to identify the cause of outages and best practices that would reduce the incidence of such outages. As a result of reporting and our subsequent analysis, measureable reliability improvements have been achieved, and reporting has led to improvements in communications infrastructure and services and emergency readiness.

6. For example, wireline outages spiked in 2008, decreasing the reliability of 9-1-1 services. Systematic analysis of monthly wireline outages and subsequent work helped to understand the root causes of this trend, and resulting in improved industry practices that reduced the estimated number of lost wireline 9-1-1 calls by 40 percent.

7. Before the adoption of this rule, interconnected VoIP services were not covered by the Commission's outage reporting rules, which meant that the Commission had little knowledge of the reliability of these services, including with respect to 9-1-1, and could not include these services in the process of continual evaluation and improvement. Yet, the Communications Act and Commission rules impose 9-1-1-related obligations on interconnected VoIP service providers. Outages of interconnected VoIP service negatively affect the ability of interconnected VoIP service providers to meet basic and enhanced 9-1-1 service obligations.

8. To remedy this situation, on May 12, 2011, we adopted an NPRM proposing to extend outage reporting obligations under Part 4 of the rules to interconnected VoIP services for both complete service outages and situations where, though service is technically available, performance conditions prevent communication. In the NPRM, we also proposed to apply the Part 4 outage reporting rules to both broadband access and broadband backbone Internet services for both complete and technical performance outages. In this Report and Order, we extend Part 4 reporting obligations to interconnected VoIP services with respect to complete service outages, and defer action on technical performance outages. We also defer action on all outage reporting of broadband Internet services.

III. Need for Collecting Outage Information

A. Need for the Requirement

9. We conclude that significant outages of interconnected VoIP service should be reported to the Commission. In the NPRM, we proposed to extend the Part 4 outage reporting requirements to both facilities- and non-facilities-based interconnected VoIP

services. The Commission recognized that monitoring and analysis of outages is needed in light of increasing evidence that major VoIP service outages are occurring and given that such outages may disable 9-1-1 and other service capabilities.

10. Comments. Most industry commenters argue that the Commission does not need to collect interconnected VoIP service outage information because service providers have market incentives to ensure that their systems are reliable. Some industry commenters argue that the interconnected VoIP information is unnecessary because broadband network technologies are designed to reroute traffic to avoid loss of service and/or connectivity, and thus, an outage of a facility for interconnected VoIP service may have no effect on the ability to continue to send or receive the related traffic. Some industry commenters argue that the burdens of extending the Part 4 requirements outweigh the benefits or are otherwise not justified. State government and commenters from critically important industry sectors, however, indicate that this additional outage information is needed to protect the public.

11. Discussion. Outage reporting is the most effective and least burdensome way to ensure that interconnected VoIP providers are meeting their statutory obligation to provide 9-1-1. Without such reporting, we will continue to have extremely limited visibility into the reliability of access to 9-1-1 emergency services. Since the institution of the Part 4 rules in 2004, we have reviewed and analyzed outage data on both an individual provider and an aggregated basis. We regularly collaborate with providers to identify the causes of outages, develop and apply best practices to address the causes of outages.

12. The Commission is uniquely positioned to piece together an overall picture of aggregated network performance because of the ability to collect and analyze outage data provided by communications providers that would otherwise be disinclined to share sensitive outage data. The Commission's ability to look at information received from different providers allows us to assess large-scale outages when they occur, thereby increasing the opportunities for federal assistance in dealing with the immediate problem. Analysis of NORS data has served as a uniquely effective precipitating force for improving network reliability, and thus the reliability of 9-1-1 services. This happens via a number of mechanisms:

13. First, the Commission regularly provides the Network Reliability Steering Committee (NRSC) with aggregated outage data across all entities subject to Part 4 of the rules and draws attention to those categories of outages showing a statistically significant trend upward in the number of outages. Depending on the type of outage, the Commission may request that the NRSC create a team to recommend procedures, best practices and, in some cases, equipment design alterations to address the underlying issue. For example, following this process, in one six-month period in the 2008-2009 time frame, the Commission worked with the NRSC to reverse the trend in an increase in wireline outages, and consequently there was a more than 40-percent reduction in the estimated lost 9-1-1 calls due to wireline outages.

14. Second, using outage reporting data and coordinating with providers, the Commission has been able to spot upward trends in the number of outages filed by particular providers. In these cases, the Commission contacts the provider and works with it to identify causes and solutions. Consequently, some service providers have

implemented large-scale improvements to their networks, reducing outages and increasing resiliency of the communications infrastructure and availability of the public safety services that rely on the communications infrastructure.

15. Third, the Commission staff can identify industrywide issues through NORS analysis. In 2010, Commission staff discerned from outage reports that a significant number of outages associated with delivery of 9-1-1 services were being caused by a relatively small number of factors, each of which could be addressed by applying known best practices, and a Public Notice was released identifying these particular practices and urging communications providers to implement them widely in their networks.

16. Fourth, the Commission can leverage outage data to assist in emergency responses. For example, during emergency situations, the Commission can provide “Notification” data in NORS to the U.S. Department of Homeland Security, where it is used to support the emergency response.

17. In these ways, the Commission’s intervention has resulted in tangible improvements to the communications reliability necessary to support 9-1-1 service. No single provider has the data to spot trends across industry and lead efforts to address reliability problems. Therefore, we disagree with commenters that argue that market incentives eliminate the need for network outage reporting. In addition, we are not persuaded that outage reporting is unnecessary because broadband technologies reliably reroute traffic, particularly in light of the rise in the incidence of significant VoIP outages. Observers in critical infrastructure industries and in government, domestically and abroad, are becoming increasingly aware of the need to track reliability data obtained

from services relying on broadband technologies to help ensure the reliability of emergency services and critical communications.

18. Further, reporting outage data is the most efficient means for the Commission to ensure that interconnected VoIP service providers are complying with their statutory obligation to provide 9-1-1 service, and to obtain critical information needed to monitor the reliability and availability of VoIP 9-1-1/E9-1-1 services. Both the Act and the Commission's rules mandate that interconnected VoIP service providers provide 9-1-1 and E9-1-1 service. The rules we adopt today will provide the Commission with a mechanism in place to monitor whether these providers are complying with this basic obligation. Requiring interconnected VoIP service providers to promptly file reports when they experience outages that meet certain thresholds appears vastly superior, for example, to a complaint-driven process; the latter would likely be ineffective in enabling the Commission to detect and resolve quickly.

B. Mandatory or Voluntary Requirement

19. We conclude that reporting significant outages of interconnected VoIP service should be mandatory, as was proposed in the NPRM. Mandatory reporting would permit the Commission to obtain a comprehensive, nationwide view of significant outages and assess and address their impact on 9-1-1 and other services, while voluntary reporting would likely create substantial gaps in data that would thwart efforts to monitor compliance with statutory obligations and to analyze and facilitate improvement of the Nation's 9-1-1 system.

20. Comments. Some commenters suggest that, if the Commission extends its outage reporting rules, then reporting should be entirely voluntary; some argue that

existing voluntary efforts by providers and their ongoing involvement in public-private coordination efforts to share information and promulgate best practices are sufficient to minimize risks to the communications infrastructure. Several industry parties argue that any reporting process should be voluntary and modeled after the voluntary Disaster Information Reporting System (DIRS).

21. Discussion. Our experience has been that competitive friction frequently makes service providers reluctant to voluntarily disclose detailed information about their own service outages. There was a history of several years of unsuccessful voluntary outage reporting trials conducted by groups working under the auspices of Network Reliability and Interoperability Council (NRIC). Those trials showed that provider participation was spotty, and the quality of information obtained was very poor. Based on this experience, the existing Part 4 reporting system was adopted as a mandatory reporting scheme to ensure timely, complete and accurate reporting. The record in this proceeding provides us with no reason to believe that long-term, voluntary reporting would fare any better this time around. This reluctance would inhibit the development of a highly reliable, nationwide 9-1-1 service, because it inhibits the kinds of information sharing and analysis described above. Moreover, even if VoIP providers were not reluctant to share this information, an individual provider would have insufficient incentive to share such data, because some of the benefits would accrue to other providers. As we explained earlier, the outage information shared by one provider has led to the development of industry best practices that have benefited all providers nationwide. Given the significant increase in VoIP usage, the risks of a less vigilant approach in this context are becoming indefensible.

22. We are also not persuaded that any new outage reporting process should apply the voluntary DIRS model. DIRS is a reporting system for use during large-scale disasters. DIRS is rarely activated, and the urgent events that lead to its activation tend to motivate communications providers to cooperate. Outage reporting, on the other hand, is designed to enable the Commission to identify key network failures quickly to facilitate restoration and, over time, to create a consistent body of data to permit analysis of trends. Moreover, apart from the outage reports themselves, the Commission may otherwise be unaware of the underlying cause of the outage, such as an internal network failure, whereas outages reported under DIRS are generally widely known and created by an external event.

23. The Commission's poor experience with voluntary outage reporting is not unique. The New York Public Service Commission, for example, comments that – based on its experience – voluntary reporting does not ensure that providers “will provide timely, accurate outage information.” Likewise, the Japanese government finds it necessary to require mandatory outage reporting from broadband communications providers, including high-quality VoIP service.

24. As we observed, the Commission attempted a voluntary outage reporting trial without success before adoption of the Part 4 rules. The record in this proceeding provides us no reason to believe that long-term, voluntary reporting would fare any better this time around. We believe a mandatory reporting requirement best meets the needs of the Commission to ensure the statutory mandate that interconnected VoIP service providers deliver reliable 9-1-1 service.

25. In short, given the long-term upward trend in VoIP subscription and use, the growing dependence on VoIP for 9-1-1 communications, our prior experience with voluntary reporting, and the statutory mandate that VoIP providers provide 9-1-1, we adopt mandatory outage reporting of interconnected VoIP service. To the extent that interconnected VoIP service providers have affiliated and/or non-affiliated entities that maintain or provide communications networks or services used by the provider in offering such communications, these obligations apply to them as well.

26. The rules adopted modify significantly the proposal in the NPRM₁ in part in response to providers' concerns regarding the costs and burdens. In the NPRM, we proposed to extend Part 4 to broadband Internet in addition to interconnected VoIP services. In addition, we proposed to require reporting of both loss of service/connectivity as well as situations where, though service is technically being provided, packet loss, latency or jitter were experienced at a level that effectively prevented communication. We are not acting at this time on the extension of Part 4 rules to broadband Internet service providers or to outages based on performance degradation, both of which were sharply opposed by industry in part based on the expected costs. The rules we adopt to extend outage reporting to interconnected VoIP services received broad support in the record, and no commenter has argued that this type of reporting would be unduly burdensome. The reporting obligation we impose will allow us to fulfill our own obligations and to adequately monitor providers' compliance with statutory 9-1-1 obligations.

27. The record in this proceeding reflects that the additional costs of compliance with our data collection requirement would be minor and significantly outweighed by the

benefits. We require the reporting only of significant outages where customers lose service and/or connectivity and, therefore, the ability to access 9-1-1 services. Given providers' incentives to satisfy their customers, it is reasonable to conclude that every such provider is already tracking this sort of information. The configuration of VoIP service should already make this information available. For example, the Network Management System (NMS) of interconnected VoIP providers is able to auto-poll or execute a manual poll of a portion or all of its VoIP-enabled devices to see if they have connectivity. Thus, interconnected VoIP service providers have the ability to monitor their end-user devices to determine if connectivity to those devices has been lost. The record shows that the costs involved in determining whether customers are completely out of service do not impose an undue burden. A wide array of commenters submit that the type of outage reporting requirement we are adopting today is either reasonable, not unduly burdensome, or could be applied so as not to be unduly burdensome. Even small providers do not assess our outage reporting requirement to be a burden. This Report and Order limits outage reporting to a complete loss of interconnected service, an approach that achieves Commission purposes but is sensitive to costs.

28. As interconnected VoIP service providers are driven by business reasons to monitor for service outages, it follows that tracking such information under our rules should not be unduly burdensome. It is significant that not one commenter has stated that it would have to install any additional equipment into its network to detect when a large number of VoIP customers are out of service. We find that mandatory reporting of significant outages is minimally intrusive and fully justified by the benefits of ensuring compliance with statutory 9-1-1 statutory obligations and benefits to public safety

through robust 9-1-1 communications that we expect to result from our analysis and use of the reports.

29. Because service providers already have business reasons to routinely collect outage information, the costs of compliance with a reporting requirement are essentially those of identifying reportable outages, then electronically reformatting and uploading that information into NORS. Many of the interconnected VoIP customers are served by providers that already have years of experience filing outage reports in NORS with respect to other services. Industry-wide, the total operating cost for reporting on interconnected VoIP outages and administering outage reporting programs likely is less than \$1 million in the first year and less than \$500,000 per year thereafter for all the providers who will report.

30. In arriving at our decision, we considered feasible alternatives. We evaluated the cost effectiveness of our adopted approach against a less stringent option as well as several more stringent options. We also considered other mechanisms, such as certification. Our approach captures most of the expected benefits while avoiding the much larger costs associated with more intrusive options. Even a modest improvement in the reliability of 9-1-1 services potentially represents lives saved. Based on the record, our analysis concluded the net benefits will be greater with the approach we are adopting. With respect to the less stringent option, our adopted approach provides all the benefits of increased reliability at a nominal cost estimated to be less than \$1 million industrywide. With respect to the more stringent option, our approach captures most of the expected benefits while avoiding the much larger costs associated with those options.

31. While some commenters urge a period of transition before any mandatory outage reporting requirements go into effect, we find any significant delay unjustified in light of the fact that providers already monitor this type of activity in the ordinary course of their business and that the costs of electronically reporting related outages will not be substantial. Also, the vast majority of interconnected VoIP services are provided by an entity that also provides legacy services and, therefore, has years of experience filing in NORS. Finally, as our ultimate approach is much more circumscribed than the one proposed in the NPRM, implementing the required reporting will be far less complicated. However, to ensure that NORS updates are completed to receive these new reports and that PSHSB has an opportunity to present the updates to reporting providers and resolve questions, the mandatory reporting requirement will become effective after data collection approval from the Office of Management and Budget, and we will publish in the Federal Register an announcement of a date certain that the mandatory reporting requirement will become effective.

C. Legal Authority to Require the Outage Reporting

32. In the NPRM, we requested comment on the Commission's legal authority to extend the Part 4 outage reporting rules to interconnected VoIP service providers. We conclude that the Commission has sufficient legal authority to require the reporting of outages of interconnected VoIP service.

33. Comments. Some commenters originally expressed harsh opposition to the requirements proposed in the NPRM. Several industry commenters argue that the Commission lacks authority to take the actions proposed in the NPRM with regard to interconnected VoIP. Others argue that the Commission's authority is either unclear or

questionable. Several parties maintain that the link between the obligation to ensure 9-1-1 compliance by VoIP service providers and the imposition of outage reporting requirements on them is too tenuous to support any assertion of direct or ancillary jurisdiction. Others suggest, however, that the Commission has some authority, or even that our authority here is “unambiguous.” In more recent *ex parte* filings, some providers focus their legal objections on NPRM proposals that we do not adopt.

34. Discussion. We focus our analysis here on our authority to impose outage reporting requirements on interconnected VoIP. We are not persuaded by arguments that the Commission lacks authority to extend our outage reporting requirements to interconnected VoIP service. Consistent with our mission in section 1 to “promote[e] safety of life and property,” section 615a-1 of the Communications Act clearly imposes a “duty” on “each IP-enabled voice service [interconnected VoIP] provider to provide 9-1-1 service and enhanced 9-1-1 service to its subscribers in accordance with the requirements of the Federal Communications Commission.” Further, section 615a-1(c) generally directs the Commission to issue regulations implementing the statute. Section 615a-1(c) thus grants the Commission authority to require network outage reporting with respect to interconnected VoIP services as provided herein. In addition, the Communications Act grants the Commission broad authority to take necessary steps to implement the Act’s mandates, and thus provides concurrent sources of authority for our actions to require network outage reporting. Sections 4(i) and 303(r) generally authorize the Commission to take any actions “as may be necessary” to ensure that interconnected VoIP providers fulfill their statutory 9-1-1 and E9-1-1 duties in section 615a-1. Network outage reporting for interconnected VoIP providers is one of the less intrusive means by

which the Commission may monitor compliance with the statutory obligation to provide 9-1-1 and E9-1-1 service and identify and work to eliminate barriers to that compliance. Section 403 authorizes the Commission to launch inquiries to resolve compliance matters and other questions regarding the provisions of the Communications Act. With regard to affiliates of common carriers -- the subscribers of which represent an increasing share of all residential interconnected VoIP subscribers, currently over ten percent -- the Commission also is authorized to impose outage reporting requirements under section 218, which grants the Commission broad investigatory powers to inquire into the management of the business, which would include VoIP service providers that are affiliates of common carriers subject to the Act. Finally, section 4(o) directs the Commission to study of all phases of a problem for the purpose of effective communications in connection with safety of life or property. We do just that when we collect and examine outage reports. Hence, the Commission is on solid ground to adopt the subject reporting rules.

35. We disagree with commenter assessments of the relationship between Section 615a-1 and our authority. AT&T, for instance, argues that section 615a-1 is not an express grant of authority to the Commission to order the regulation of VoIP service providers, but rather the Commission's role under that provision is to "pave the way" for VoIP service providers to provide 9-1-1 and E9-1-1 service by adopting regulations applicable to the owners and controllers of 9-1-1 facilities, who are ILECs, CLECs, and third-party providers, to make that possible. AT&T points to the context of the enactment of section 615a-1 as indicative of the limited nature of its scope.

36. AT&T's arguments are inconsistent with the express terms of the statute, which covers VoIP service providers and plainly is not limited to the owners and controllers of trunks and routers. Among the Commission rules that section 615a-1 codified are rules directly applicable to VoIP service providers. These rules impose detailed obligations on the manner in which interconnected VoIP providers provide E9-1-1. Further, AT&T's arguments are inconsistent with the Commission's previous views on the scope of section 615a-1. Following enactment of the NET 911 Improvement Act, the Commission in implementing section 615a-1 adopted rules in the NET 911 Report and Order, which requires interconnected VoIP service providers to comply with all applicable industry network security standards to the same extent as traditional telecommunications carriers when accessing capabilities traditionally used by carriers. This standard is comprehensive and not limited to network security standards that are ostensibly E9-1-1-related.

37. With respect to CTIA's concern about technological neutrality expressed in section 615a-1(e)(1) limitation, nothing in this Report and Order violates that limitation. The outage reporting requirement and threshold in this Report and Order do not favor or disfavor any particular technology. To the contrary, our action arguably corrects an imbalance that existed by requiring some providers of voice and 9-1-1 service to report outages, but not others.

38. The Commission has ancillary authority to ensure both that interconnected VoIP providers fulfill their duty to provide 9-1-1 services and to address major obstacles to their doing so, such as failures in underlying communications networks. For example, CTIA argues that "the proposed rules sweep too broadly to be linked to the expressly

delegated responsibility to provide 9-1-1 services, and Verizon argues that the Commission has provided no explanation regarding how its proposed requirements would result in ensuring that VoIP providers meet their statutory duty to provide 9-1-1 service. The relationship between network reliability and reliable 9-1-1 service is clear: without reliable network operations, there can be no reliable 9-1-1 service. As explained throughout the decision, reporting obligations act as a critical element to enable the Commission to identify and evaluate lapses in the provision of 9-1-1 service in order to enable providers to meet their obligations under the statute. Indeed, as a general matter, the Commission regularly imposes reporting requirements on its regulatees to ensure compliance with statutory and regulatory obligations. The imposition of such reporting requirements in this instance is appropriate not only to enable the Commission to ensure that providers are complying with their legal obligations, but also to enhance the reliability of such service industry-wide.

D. Outage Metrics and Thresholds

39. Facilities-Based vs. Non-Facilities-Based Interconnected VoIP Services. We conclude that the outage reporting requirements should apply to both facilities- and non-facilities-based interconnected VoIP services. Given that interconnected VoIP services increasingly are now viewed by consumers as a substitute for traditional telephone service, in the NPRM, we proposed to extend our outage reporting rules to both facilities-based and non-facilities-based interconnected VoIP service providers.

40. Comments. Several commenters agree that, if the Commission adopts rules extending outage reporting to interconnected VoIP services, the rules should apply equally to both facilities-based and non-facilities-based interconnected VoIP services.

For example, NASUCA and the New Jersey Division of Rate Counsel take this position as both types of VoIP services are already subject to 9-1-1 service obligations. Some commenters argue against inclusion of non-facilities-based, interconnected VoIP services, saying that non-facilities-based interconnected VoIP service providers have no visibility into other providers' networks.

41. Discussion. We adopt our proposal to extend the outage reporting rules to both facilities-based and non-facilities-based interconnected VoIP service providers because both types of providers are subject to the same statutory and regulatory duties to provide E9-1-1, and subscribers of non-facilities-based interconnected VoIP services should benefit from our work with industry to ensure robust access to emergency services just as subscribers of facilities-based interconnected VoIP and traditional services do.

42. Accounting for technical differences between facilities-based and non-facilities based interconnected VoIP service providers, we require non-facilities-based VoIP service providers to report service outages that involve facilities that they own, operate, lease, or otherwise utilize. Non-facilities-based VoIP providers must report service outages that meet the threshold to the extent that they have access to information on service outages affecting their customers. As both facilities- and non-facilities-based interconnected VoIP providers are able to use NMS to determine the connectivity of their end-devices, we expect that they will be able to report on the loss of service and/or connectivity to their customers' terminals. The non-facilities VoIP providers may not be able to tell where connectivity has failed if the failure has occurred in another provider's network, but it can tell that its call management cannot reach the end-user devices, and thus, an outage has occurred that affects its customers. They should be able to report

significant outages where their call management systems have lost connectivity to their customers' end-user devices. Also, even where broadband networks provide facilities-based VoIP service, there will still be a number of end-users that will use a non-facilities-based interconnected VoIP service instead of the broadband service associated with the facilities-based interconnected VoIP service provider. Thus, the Commission would not know the true loss of voice service to end-users, as it is actually facilities-based plus non-facilities-based outages that should be counted. Thus, we will require both facilities-based and non-facilities-based interconnected VoIP to report service outages.

43. Definition of Outage. We conclude that the current Part 4 definition of “outage” should apply also to outages of interconnected VoIP service. Currently under Part 4 of our rules, an “outage” is defined to include “a significant degradation in the ability of an end user to establish and maintain a channel of communication as a result of failure or degradation in the performance of a communications provider's network.” Our current rules tailor the definition of a reportable significant degradation to communications over cable, telephony carrier tandem, satellite, SS7, wireless, or wireline facilities. Broadband networks operate differently than legacy networks, so the impact of outages is likely to be different. This difference does not appear to require a different definition of outage for reporting purposes, so in the NPRM, the Commission proposed to apply the existing definition of outage to interconnected VoIP, tailored to the characteristics of the broadband technologies. In the NPRM, the Commission also proposed a broad standard of a “loss of generally-useful availability and connectivity” to represent the degradation in the performance of a communication provider’s network and

sought comment on packet loss, round-trip latency, and jitter as appropriate metrics to trigger the outage reporting.

44. Comments. Many commenting parties support applying the current Part 4 definition of an “outage” to interconnected VoIP service providers. Other parties raise concerns with the definition of “outage.” CTIA is concerned about a regulatory scheme for VoIP service that would treat perceived or actual performance degradation as a reportable outage. MegaPath states that the current outage definition is overly broad and fails to take into account the unique characteristics of the broadband network.

45. Several commenting parties do not support the concept of “loss of generally-useful availability or connectivity” in differentiating among outages. MetroPCS argues that a broad standard of “loss of generally-useful availability and connectivity” exacerbates the problem of precisely associating an outage with underlying network conditions. Vonage argues that the measures proposed in the NPRM – packet loss, latency, and jitter – do not relate to actual outages, but are instead measures of call quality. Vonage further argues that the collection of such quality of service information simply will not indicate when a VoIP customer loses the ability to make an emergency call.

47. Discussion. We apply to interconnected VoIP services the current Part 4 definition of an “outage” as “a significant degradation in the ability of an end user to establish and maintain a channel of communications as a result of failure or degradation in the performance of a communications provider's network.” Yet, the triggering criteria for a reportable “outage” for interconnected VoIP outage reporting purposes that we adopt today excludes the concept of a “loss of generally-useful availability and

connectivity” proposed in the NPRM based on performance degradations. We defer a decision on that issue. For the purposes of the rules we adopt today, a “significant degradation” resulting in “the complete loss of service or connectivity to customers” is a reportable outage if it meets the reporting criteria and thresholds.

47. We are persuaded by arguments that the proposed reporting of an interconnected VoIP outage be based on the “the complete loss of service or connectivity to customers.” We agree with the rationale that triggering the reporting of an interconnected VoIP outage based on the loss of a user’s ability to make or receive a call, as opposed to the loss of generally-useful availability and connectivity, as measured by packet loss, latency, and jitter standards, would avoid the need to revise packet loss, latency, and jitter standards as providers continue to improve performance.

48. Furthermore, we accept that determining what constitutes a “loss of generally-useful availability and connectivity” in a broadband environment is considerably more complicated than in the legacy network context. In the environment in which interconnected VoIP service operates, voice is a real-time application that utilizes broadband connectivity and is more sensitive to network impairments than non-real-time applications such as email. Although we believe performance degradations affect the ability of facilities-based and non-facilities-based interconnected VoIP service providers to establish and maintain 9-1-1 calls, adopting bright-line reporting criteria reduces the burden on the providers while, we expect, delivering to us the information we need.

49. Reporting Thresholds. We conclude that the outage reporting thresholds for interconnected VoIP service outages should be similar to the existing Part 4 outage reporting thresholds. Based on how interconnected VoIP service is typically configured

and provided, the NPRM proposed that a significant degradation of interconnected VoIP service exists and must be reported when an interconnected VoIP service provider has experienced an outage or service degradation for at least 30 minutes: on any major facility that it owns, operates, leases, or otherwise utilizes; potentially affecting generally useful availability and connectivity of at least 900,000 user minutes; or otherwise potentially affecting special offices, or special facilities, including 9-1-1 PSAPs. The rule we adopt requires reporting of outages where there is a complete loss of service. We defer action on the issue of reporting outages for performance degradation that involves less than a total loss of service.

50. Comments. NASUCA comments that it is plausible that industry would be tracking significant performance degradation in order to compete effectively in relevant markets, but most industry commenters oppose the adoption of any performance degradation metric as a triggering mechanism for a reportable outage. The parties argue the reporting of outages should be based on actual loss of service rather than performance degradation measurements that were proposed in the NPRM. Other parties argue that requiring outage reports based on quality of service measurements would greatly increase regulatory compliance burdens and expand the obligations of interconnected VoIP service providers beyond those that apply to providers of circuit-switched telephony under the current Part 4 Rules.

51. With respect to reporting outages or service degradation as a result of a major facility failure, Verizon states that it deploys many of these elements in a redundant, diverse manner such that an outage on a given network element may have no impact on a subscriber's ability to establish and maintain a channel of communications.

52. Discussion. We adopt outage reporting thresholds for interconnected VoIP service outages similar to the existing Part 4 wireline and wireless communications service outage reporting thresholds. We apply to interconnected VoIP service providers the obligation to report when they have experienced, on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration: (1) that potentially affects at least 900,000 users; (2) that potentially affects any special offices and facilities (in accordance with paragraphs (a) - (d) of section 4.5); or (3) that potentially affects a 9-1-1 special facility (as defined in (e) of section 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 9-1-1 facility as the provider's contact person for communications outages at that facility, and they shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on callers to that facility.

53. We defer action at this time on the performance degradation reporting metrics and thresholds proposed in the NPRM. Based on the record, we believe that the simpler rules we adopt today will provide a clear view into E9-1-1 compliance as well as advance the goals we have laid out above with regard to working with industry to improve performance. The rules we adopt today are more consistent with the rules we apply to other providers under the existing rules. Therefore, we will not at this time require reporting based on packet loss, latency, or jitter. Instead, we will require the reporting of an interconnected VoIP outage based on the complete loss of service or connectivity.

54. With respect to reporting outages due to major facility failures, after carefully studying the record, we will not at this time adopt the proposal in the NPRM to require

outage reporting when an interconnected VoIP service experiences a major facility failure. We believe the rules, as adopted, sufficiently account for major facility failures that result in reportable outages meeting the thresholds defined. We recognize a major facility failure, depending on how the interconnected VoIP service provider has engineered those major facilities, may not necessarily result in a reportable outage meeting the thresholds, and we, therefore, do not require, at this time, the reporting of outages on this basis.

55. Reporting Process for Outages of Interconnected VoIP Service. We conclude that the reporting process for significant outages of interconnected VoIP service should differ in certain respects from the proposal in the NPRM. We extend the time frame for notification of an outage and reduce the number of required submissions. The NPRM proposed to follow the current Part 4 reporting process for interconnected VoIP service providers. Under the current rules, providers are required to notify the Commission with very basic information within two hours of discovering a reportable outage, file an initial report within 72 hours, and file a final report within 30 days that provides detail on the outage. The Final Communications Outage Report must contain all potentially significant information known about the outage after a good faith effort has been made to obtain it. The current NORS process provides an electronic reporting template to facilitate outage reporting by those currently subject to our Part 4 rules. In the NPRM, we proposed to follow the same reporting process.

56. Comments. The majority of parties commenting on this issue focused on the burden of filing multiple reports, and filing those reports while simultaneously seeking to resolve the network outage. Although state government commenters generally support

the proposed deadlines, industry commenters argue that the proposed deadlines would be too restrictive. Opposition to the proposed reporting timeframes centers on several arguments: reporting requires critical personnel to spend time reporting instead of fixing the underlying problem; the complexity of the network makes it too difficult to report within two hours; and, to develop best practices, the only report needed is a 30-day final report.

57. Discussion. We are persuaded by commenters' arguments to adopt a reporting process similar to NORS, but lengthen the notification interval to allow more time for interconnected VoIP service providers to work the outage problem as opposed to reporting on the outage. We agree with MetroPCS' rationale for lengthening the initial notification in that "this change is particularly important since data networks operate differently than voice networks, and the cause of some degradations of service may not be as clearly identifiable, which can lead to inaccurate reporting, or over-reporting, under strict time constraints." Therefore, with respect to outages that meet the reporting threshold, a notification will be due within 24 hours of discovering that an outage is reportable and a final report within 30 days.

58. Verizon's suggested two-reporting system, in which a provider would file a notification within four hours and a final report within thirty days, makes more sense to us in situations that could have the potential to have a significant negative impact on the 9-1-1 infrastructure. A two-tier report system would still provide a measure of "situational awareness" to allow the Commission to become involved in significant outages early should it choose to do so. Final reports would still give the Commission the opportunity to obtain the full details within the same timeframe as it does so today.

Yet, eliminating the initial report would reduce the providers' workloads, and if implemented in conjunction with a four-hour window for the notification, would likely still provide the Commission with valuable information at the outset of the outage.

59. We do not, however, adopt the 24-hour interval with respect to outages that may have a significant negative impact on the 9-1-1 infrastructure. For these outages, we adopt Verizon's suggested two-tier reporting structure and require notification for outages that may have a significant negative impact on the 9-1-1 infrastructure within four hours and a final report within 30 days. This provides a measure of "situational awareness" to allow the Commission to become involved in significant outages early should it choose to do so. Final reports would still give the Commission the opportunity to obtain the full details within the same timeframe as it does so today. Yet, eliminating the initial report would reduce providers' workloads considerably without harming the Commission's ability to react in the short term or facilitate the development and application of best practices in the long term.

60. Accordingly, the Commission will require all interconnected VoIP service providers to submit electronically a Notification to the Commission within four hours of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration that potentially affects a 9-1-1 special facility. In such situations, they also must notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 9-1-1 facility as the provider's contact person for communications outages at that facility, and the provider must convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the

outage on efforts to communicate with that facility. Such timing of the Notification targets conditions in which the 9-1-1 infrastructure is most likely to experience a negative impact, and balancing costs and burdens.

61. Interconnected VoIP service providers that experience a reportable outage that does not affect a 9-1-1 special facility must submit electronically a Notification to the Commission within twenty-four hours of discovering such an outage. This timing recognizes that these outages are less likely to impact the 9-1-1 infrastructure negatively, though the ability of users to make individual 9-1-1 calls may nonetheless be impaired. This distinction also balances different potential benefits with costs and burdens.

62. Regardless of which of the two above conditions prompts the Notification, not later than 30 days after discovering the outage, the provider must submit electronically a Final Communications Outage Report to the Commission. We adopt a very similar level of specificity in reporting content and the same electronic reporting processing as is required by NORS.

63. The process we adopt for reporting significant outages of interconnected VoIP service reduces the burden on providers from that proposed in the NPRM. Reducing the number of reports from three to two and extending the time frame for reporting will provide the Commission with the information it needs while reducing the reporting burden on the providers. It is likely that most interconnected VoIP service providers currently collect information on significant outages in the ordinary course of their business in order to serve their customers effectively. We conclude that the reporting burden is minimal and well-justified by the benefits to 9-1-1 reliability.

E. Part 4 Rules and Voice Service - New Wireless Spectrum Bands

64. We clarify that Part 4 of the rules currently covers all providers of Commercial Mobile Radio Service (CMRS) voice (and paging) service regardless in which spectrum band the service is provided and that the process that applies to reporting outages of these services should be the process in the current Part 4 rules. In 2004, when the Commission extended in its outage reporting requirements beyond wireline providers in its 2004 Part 4 Order to include wireless providers, the Commission enumerated several types of licensees providing wireless service that would be covered by the Part 4 outage reporting obligations. Since that time, licensing in additional spectrum bands, *e.g.*, Advanced Wireless Services (AWS) and 700 MHz licensing, has become available for wireless services. Our 2004 Part 4 Order suggests that the Commission intended to extend the scope of outage reporting to include all non-wireline providers, including new technologies developed after the adoption of the decision which established the existing outage reporting rules. In the NPRM, we sought comment on whether we should amend Section 4.3(f) to clarify and reflect this meaning.

65. Comments. MetroPCS argues that competition and innovation are best served by not extending the current outage reporting rules to new spectrum bands or technologies. It, however, recognizes that if the Commission were to adopt MetroPCS's recommendation to not extend the current Part 4 rules to licensees in the AWS and 700 MHz spectrum bands, an unlevel wireless service provider playing field may result. The WCS Coalition also argues that AWS, 700 MHz, WCS and other similarly situated licensees should be exempt from new Part 4 outage reporting requirements until such time as they are required to meet their initial performance or substantial service obligations under their service-specific rules.

66. Discussion. We believe that the existing rules apply to wireless service providers including CMRS communications providers that use cellular architecture and CMRS paging providers. That includes AWS and 700 MHz, as well as Personal Communications Service (PCS), Broadband Radio Service (BRS) that elect common carrier service, Educational Broadband Service (EBS) that elect common carrier service, and Wireless Communications Service (WCS) wireless service providers, *inter alia*, operating as CMRS communications providers that use cellular architecture or as CMRS paging providers, are subject to the outage reporting obligation. We also believe that our 2004 Part 4 Order establishing the existing outage reporting rules extended the scope of outage reporting to include all non-wireline providers, including new technologies developed after adoption of our 2004 Part 4 Order. To eliminate any potential for confusion, we amend the rule by eliminating specific examples of services. This elimination will avoid any potential for confusion as to the rule's scope as new spectrum bands are authorized and/or reallocated.

67. We are not persuaded by commenters' arguments that AWS and 700 MHz services should be exempt from outage reporting requirements. To provide an exemption for AWS and 700 MHz would lead to an unlevel playing field among competing mobile service providers. These newer wireless technologies are forming the core of major deployments where an outage could impact an increasingly large number of users.

68. Reporting Process. We conclude that the reporting process as reflected in the existing reporting structure in NORS should be the same for AWS and 700 MHz wireless service providers as for the other wireless service providers. Since we have clarified that section 4.3(f) should be read broadly to include such services as AWS and 700 MHz as

among those wireless service providers covered by the Part 4 reporting obligations, the technical requirements for making the reports used for these other wireless service providers should also apply to AWS and 700 MHz service providers. We see no reason that would warrant different treatment.

IV. Sharing of Information and Confidentiality

69. We will apply the same confidential treatment and restricted information sharing to reports of interconnected VoIP service outages as currently apply to outage reports of services already subject to Part 4 of the rules. The NPRM proposed to treat outage reports filed with respect to interconnected VoIP service as presumptively confidential, the same manner outage reporting data is currently treated under Part 4. The NPRM also sought comment on making aggregated information across companies public, and whether the Commission should share this new outage information with other Federal agencies on a presumptively confidential basis.

70. Comments. Most commenters addressing the issue support treating reported information as presumptively confidential. ATIS, AT&T, CenturyLink, and New York PSC support the Commission's sharing of information with other Federal agencies. AT&T, CenturyLink, ATIS, and WISPA do not oppose the public disclosure of aggregated outage information provided the individual service provider data will not be identified. Telecommunications Industry Association (TIA) opposes the public disclosure of the aggregated information, arguing that the Commission has acknowledged that "disclosure of outage reporting information to the public could present an unacceptable risk of more effective terrorist activity."

71. Discussion. We direct that individual outage reports of interconnected VoIP

service providers also be treated on a presumptively confidential basis, that sharing of such reports with other Federal agencies, as needed, be conducted on the same basis, and that aggregated information across providers may be publicly reported. The Commission makes existing outage reports available to the U.S. Department of Homeland Security (DHS) pursuant to the authority of DHS under the Homeland Security Act of 2002.

Sharing confidential materials with other Federal agencies is governed by Section 0.442 of the Commission's rules, which provides that the Commission may share with other Federal agencies materials received under a request for confidential treatment or that are presumptively confidential, and the confidentiality of the records travels with the records.

The approach here is identical to the one we took with regard to outage reports from traditional providers subject to the existing Part 4 rules; we are aware of no problems resulting from the current approach.

V. Voluntary Dialogue on Internet Service Outage Issues

72. The NPRM addressed whether the Commission should extend its outage reporting requirements to significant outages of broadband Internet service, and if so, what outage metrics and thresholds should apply. The technical issues involved in identifying and reporting such outages require further study. The record in this proceeding shows a willingness by broadband Internet service providers to participate in a voluntary process to improve the Commission's understanding of the underlying technical issues associated with broadband Internet service outages to assist public safety and first responders.

VI. Conclusion

73. We adopt outage reporting requirements for interconnected VoIP service providers and conclude that this action will best serve the public interest by enabling the Commission to obtain the necessary information regarding services disruptions in an efficient and expeditious manner. This action addresses the need for information on service disruptions that could affect homeland security, public health and safety, including the reliability of the Nation's 9-1-1 system. This action takes into account the associated costs and burdens, the trend in greater VoIP service usage and its potential impact on the Nation's 9-1-1 infrastructure, and the increasing importance of IP networks.

VII. Procedural Matters

A. Accessible Formats

74. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

B. Regulatory Flexibility Analysis

75. As required by the Regulatory Flexibility Act of 1980, see 5 U.S.C. § 604, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The FRFA is set forth in Appendix B of the document.

C. Paperwork Reduction Act Analysis

76. The Report and Order contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be

submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other interested parties are invited to comment on the new information collection requirements contained in this proceeding.

77. We note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506 (c)(4), we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. We have described impacts that might affect small businesses, which includes most businesses with fewer than 25 employees, in the FRFA in Appendix B, *infra*.

D. Congressional Review Act

78. The Commission will send a copy of the Report and Order in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act (CRA), see 5 U.S.C. § 801(a)(1)(A).

E. Final Regulatory Flexibility Analysis

79. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was included in the NPRM in PS Docket No. 11-82. The Commission sought written comment on the proposals in this docket, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

VIII. Ordering Clauses

80. Accordingly, IT IS ORDERED, pursuant to sections 1, 2, 4(i)-(k), 4(o), 218, 219, 230, 256, 301, 302(a), 303(f), 303(g), 303(j), 303(r), 403, 615a-1, 621(b)(3), 621(d),

and 1302(a), and 1302(b) of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)-(k), 154(o), 218, 219, 230, 256, 301, 302(a), 303(f), 303(g), 303(j), 303(r), 403, 615a-1, 621(b)(3), 621(d), 1302(a), and 1302(b) and Section 1704 of the Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1998, 44 U.S.C. 3504, this Report and Order in PS Docket No. 11-82 IS ADOPTED and that Part 4 of the Commission's Rules, 47 CFR Part 4 is amended as set forth in Appendix C.

81. IT IS FURTHER ORDERED that the rules in this document contain information collection requirements that have not been approved by OMB. The Federal Communications Commission will publish a document in the Federal Register announcing the effective date.

82. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 4

Communications common carriers, communications equipment

FEDERAL COMMUNICATIONS COMMISSION.

Marlene H. Dortch,
Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR Part 4 as follows:

Part 4 – DISRUPTIONS TO COMMUNICATIONS

1. The authority for Part 4 is revised to read as follows:

Authority: Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 154, 155, 201, 251, 307, 316, 615a-1, 1302(a), and 1302(b).

2. Section 4.3 is amended by revising paragraph (f) and redesignating paragraph (h) as paragraph (i) and adding new paragraph (h) to read as follows:

§ 4.3 Communications providers covered by the requirements of this part.

* * * * *

(f) Wireless service providers include Commercial Mobile Radio Service communications providers that use cellular architecture and CMRS paging providers. *See* § 20.9 of this chapter for the definition of Commercial Mobile Radio Service. Also included are affiliated and non-affiliated entities that maintain or provide communications networks or services used by the provider in offering such communications.

* * * * *

(h) Interconnected Voice over Internet Protocol (VoIP) providers are providers of interconnected VoIP service. *See* § 9.3 of this chapter for the definition of interconnected VoIP service. Such providers may be facilities-based or non-facilities-based. Also included are affiliated and non-affiliated entities that maintain or provide communications networks or services used by the provider in offering such communications.

* * * * *

2. Section 4.7 is amended by revising paragraphs (e)(1) and (2) as follows:

§ 4.7 Definitions of metrics used to determine the general outage-reporting threshold criteria.

* * * * *

(e) * * *

- (1) Assigned telephone number minutes (as defined in paragraph (c) of this section), for telephony, including non-mobile interconnected VoIP telephony, and for those paging networks in which each individual user is assigned a telephone number;
- (2) The mathematical result of multiplying the duration of an outage, expressed in minutes, by the number of end users potentially affected by the outage, for all other forms of communications. For wireless service providers and interconnected VoIP service providers to mobile users, the number of potentially affected users should be determined by multiplying the simultaneous call capacity of the affected equipment by a concentration ratio of 8.

* * * * *

3. Section 4.9 is amended by adding paragraph (g) to read as follows

§ 4.9 Outage reporting requirements – threshold criteria.

* * * * *

- (g) Interconnected VoIP Service Providers. (1) All interconnected VoIP service providers shall submit electronically a Notification to the Commission:
- (i) Within 240 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration

that potentially affects a 9-1-1 special facility (as defined in (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 9-1-1 facility as the provider's contact person for communications outages at that facility, and the provider shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on efforts to communicate with that facility; or

(ii) Within 24 hours of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration:

(A) That potentially affects at least 900,000 user minutes of interconnected VoIP service and results in complete loss of service; or

(B) That potentially affects any special offices and facilities (in accordance with paragraphs § 4.5(a) through (d)).

(2) Not later than thirty days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and Final reports shall comply with all of the requirements of § 4.11.

[FR Doc. 2012-9749 Filed 04/26/2012 at 8:45 am; Publication Date: 04/27/2012]